



Installing the Base Station

This chapter describes the base station hardware setup and includes the following sections:

- Warnings
- Installation Guidelines
- Unpacking the Base Station
- Connecting to a Cable or DSL Modem
- Connecting to a LAN or PC
- Connecting to a Telephone Line

Warnings

Translated versions of the following safety warnings are provided in Appendix B, “Translated Safety Warnings.”



Note

The FCC, with its action in ET Docket 96-8, has adopted a safety standard for human exposure to radiated frequency (RF) electromagnetic energy emitted by FCC-certified equipment. Cisco Aironet products meet the uncontrolled environmental limits found in OET-65 and ANSI C95.1, 1991. Proper operation of this radio device according to the instructions in this publication will result in user exposure substantially below the FCC recommended limits.

Warnings

**Warning**

Do not operate your wireless network device near unshielded blasting caps or in an explosive environment unless the device has been modified to be especially qualified for such use.

**Warning**

Do not work on the system or connect or disconnect cables during periods of lightning activity.

**Warning**

The plug-socket combination must be accessible at all times because it serves as the main disconnecting device.

**Warning**

Read the installation instructions before you connect the system to its power source.

**Warning**

This product relies on the building's installation for short-circuit (overcurrent) protection. Ensure that a fuse or circuit breaker no larger than 120 VAC, 15A U.S. (240 VAC, 10A international) is used on the phase conductors (all current-carrying conductors).

**Warning**

The device is designed to work with TN power systems.

**Warning**

Never touch uninsulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.

**Warning**

Hazardous network voltages are present in WAN ports regardless of whether power to the unit is OFF or ON. To avoid electric shock, use caution when working near WAN ports. When detaching cables, detach the end away from the unit first.

**Warning**

Ultimate disposal of this product should be handled according to all national laws and regulations

Installation Guidelines

Because the base station is a radio device, it is susceptible to common causes of interference that can reduce throughput and range. Follow these guidelines to ensure the best possible performance:

- Place the base station in a central location near the broadband modem, near the telephone wall connector, and near an AC wall outlet. This should be in an area where large steel structures such as shelving units, bookcases, and filing cabinets do not obstruct radio signals to and from the base station. To mount the base station on a wall, follow the instructions in *Mounting Instructions for the Cisco Aironet 340 Series Access Points, Base Stations, and Workgroup Bridges*, a short document that is in the base station package.
- Install the base station away from microwave ovens and 2.4 GHz cordless phones. Microwave ovens and some cordless phones operate on the same frequency as the base station and can cause signal interference.

Operating the Base Station in Japan

This section provides guidelines for avoiding interference when operating the Cisco Aironet 340 Series Base Station in Japan. These guidelines are provided in both Japanese and English.

Japanese Translation

この機器の使用周波数帯では、電子レンジ等の産業・科学・医療用機器のほか工場の製造ライン等で使用されている移動体識別用の構内無線局（免許を要する無線局）及び特定小電力無線局（免許を要しない無線局）が運用されています。

- 1 この機器を使用する前に、近くで移動体識別用の構内無線局及び特定小電力無線局が運用されていないことを確認して下さい。
- 2 万一、この機器から移動体識別用の構内無線局に対して電波干渉の事例が発生した場合には、速やかに使用周波数を変更するか又は電波の発射を停止した上、下記連絡先にご連絡頂き、混信回避のための処置等(例えば、パーティションの設置など)についてご相談して下さい。
- 3 その他、この機器から移動体識別用の特定小電力無線局に対して電波干渉の事例が発生した場合など何かお困りのことが起きたときは、次の連絡先へお問い合わせ下さい。

連絡先 : 03-5549-6500

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English Translation

This equipment operates in the same frequency bandwidth as industrial, scientific, and medical devices such as microwave ovens and mobile object identification (RF-ID) systems (licensed premises radio stations and unlicensed specified low-power radio stations) used in factory production lines.

1. Before using this equipment, make sure that no premises radio stations or specified low-power radio stations of RF-ID are used in the vicinity.
2. If this equipment causes RF interference to a premises radio station or RF-ID, promptly change the frequency or stop using the device. Contact the number below and ask for recommendations on avoiding radio interference, such as setting partitions.
3. If this equipment causes RF interference to a specified low-power radio station of RF-ID, contact the number below.

Contact Number: 03-5219-6000

Unpacking the Base Station

Follow these steps to unpack the base station:

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- Step 1** Open the shipping container and carefully remove the contents.
 - Step 2** Return all packing materials to the shipping container and save it.
 - Step 3** Ensure that all items listed in the Package Contents section are included in the shipment.
 - Step 4** Check each item for damage.
-

Package Contents

Each base station is shipped with the following items:

- Cisco Aironet 340 Series Base Station
- AC to DC power adapter
- Telephone cable (only units configured with integrated modem option)
- Cisco Aironet 340 Series Base Station CD-ROM
- Cisco Information Packet, which contains warranty, safety, and support information
- Cisco product registration card
- Mounting screws and anchors
- *Mounting Instructions for the Cisco Aironet 340 Series Access Points, Base Stations, and Workgroup Bridges*

**Note**

If any item is damaged or missing, notify your authorized Cisco sales representative.

User-Supplied Equipment

If you are connecting the base station to a LAN, you must supply an Ethernet cable. If you are connecting the base station Ethernet port to a PC, you must supply a crossover cable, as described in the “Crossover Cable Pinouts” section on page 2-9.

Base Station Data Connections

The base station provides data communications by using one of the following operating modes:

- Cable or DSL Modem
- PPP over Ethernet
- Dial-up 56K Modem
- Access Point



Caution

Make sure the unit is disconnected from the power source. *Do not connect* a data cable when the base station is powered up.

If you are connecting the base station to a cable or DSL modem or using PPP-over-Ethernet mode to connect to an ISP, complete the procedure in the “Connecting to a Cable or DSL Modem” section on page 2-7

If you are using the base station in Access Point or Dial-up mode to connect to a LAN, complete the procedure in the “Connecting to a LAN or PC” section on page 2-8.

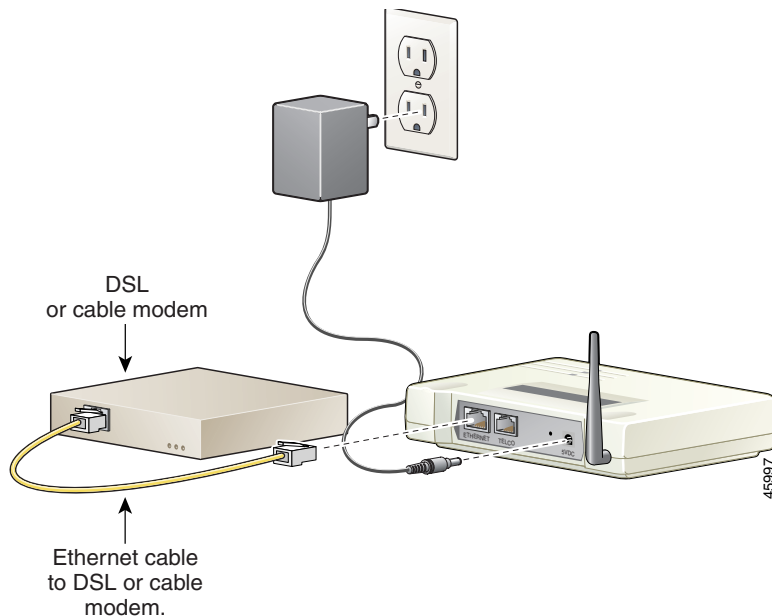
If you are using the base station in dial-up mode with the built-in 56K modem, complete the procedure in the “Connecting to a Telephone Line” section on page 2-11.

Connecting to a Cable or DSL Modem

Follow these steps to connect the Ethernet cable you provide from the base station to a cable or DSL modem (broadband Ethernet device):

- Step 1** Connect the Ethernet cable to the RJ-45 Ethernet port on the back of the base station.
- Step 2** Connect the other end of the cable to the broadband device (cable or DSL modem) on the wired LAN, as shown in Figure 2-1.

Figure 2-1 Connecting to a Broadband Modem



- Step 3** Connect the base station to the power adapter as described in the “Connecting the Power Adapter” section on page 2-12.

Connecting to a LAN or PC

The base station can support a connection from the Ethernet port to a wired LAN device, such as a hub, switch, or single PC. Connect the Ethernet cable you supply from the Ethernet port on the back panel of the base station to an Ethernet hub on the LAN.

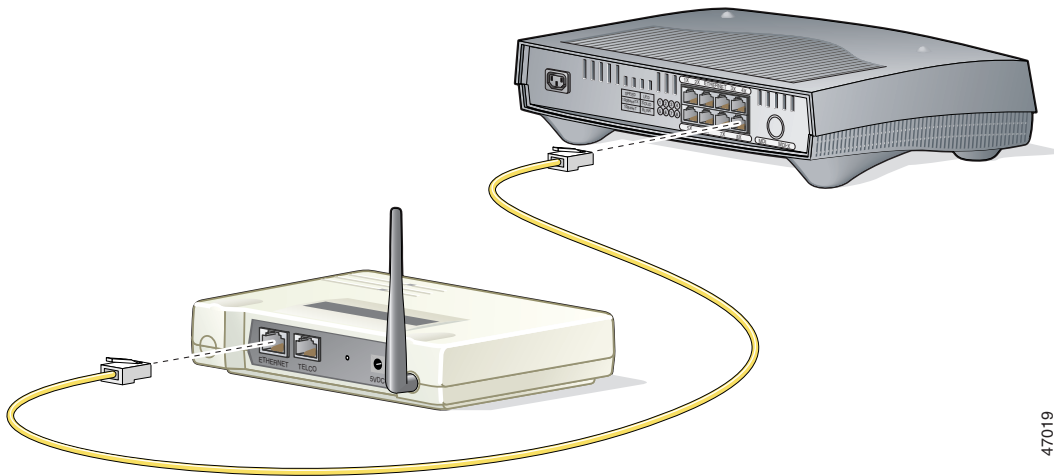
**Caution**

When the base station is configured for dial-up operation, *do not connect* it to a wired LAN being supported by another DHCP server. This might produce conflicting IP address assignments on the wired LAN because the base station DHCP server function supports both wireless and wired devices in dial-up mode.

A base station can be connected to a single PC by using a crossover cable you supply. The configuration of the crossover cable is described in the “Crossover Cable Pinouts” section on page 2-9.

Follow these steps to connect the Ethernet cable to a network device or a crossover cable to a PC:

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- Step 1** Connect the Ethernet cable or crossover cable to the RJ-45 Ethernet port on the back of the base station.
- Step 2** Connect the other end of the cable to the Ethernet device on the internal LAN, as shown in Figure 2-2, or to the Ethernet port on the PC (not shown).

Figure 2-2 Connecting to an Internal LAN Device

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- Step 3** Connect the base station to a power adapter as described in the “Connecting the Power Adapter” section on page 2-12.
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Crossover Cable Pinouts

This section provides the pinouts for creating a crossover cable that can be used to connect the base station to the Ethernet port on a single PC (as opposed to connecting the base station to a hub or switch on the wired LAN).

**Note**

The base station must be configured for Access Point or Telephone Dial-Up modes. Refer to Chapter 3, “Configuring the Base Station,” for instructions.

A crossover cable can be purchased at most computer supply stores, or you can create one by rewiring a straight-through cable, as described in this section. Table 2-1 lists the signals and pins on each end of the cable. The wire on pin 1 of cable end A must be connected to pin 3 of cable end B, and so on.

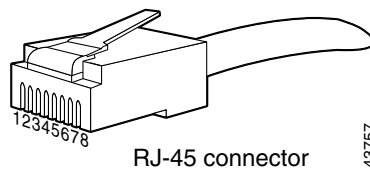
Table 2-1 Pinouts for a Crossover Cable

Cable End A		Cable End B	
Signal	Pin	Pin	Signal
Tx+	1	3	Rx+
Tx-	2	6	Rx-
Rx+	3	1	Tx+
-	4	4	-
-	5	5	-
Rx-	6	2	Tx-
-	7	7	-
-	8	8	-

**Note**

Pins 4, 5, 7, and 8 are not used in this application, although they might be wired in the cable.

Figure 2-3 shows the pin numbering on an RJ-45 connector.

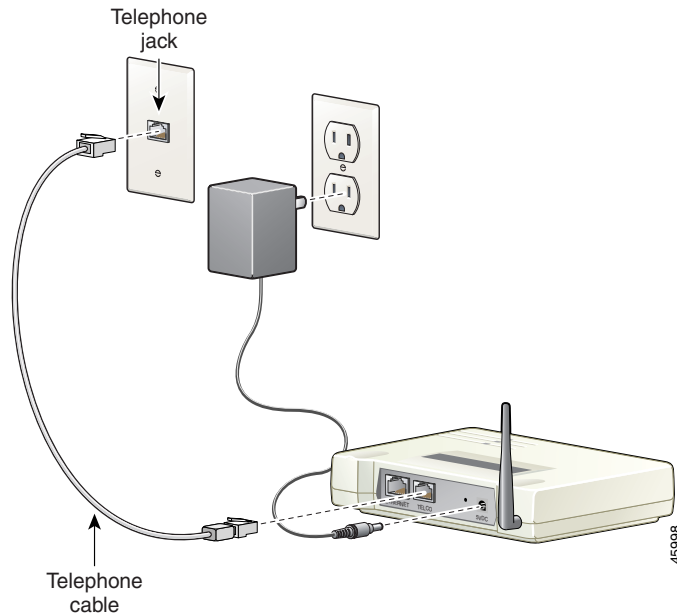
Figure 2-3 Pin Numbering on an RJ-45 Connector

Connecting to a Telephone Line

If the base station is configured to use the optional built-in telephone modem, follow these steps:

- Step 1** Connect the end of the telephone cable with a ferrite bead (small cylinder) to the RJ-11 TELCO connector on the back of the base station.
- Step 2** Connect the other end of the cable to the telephone wall connector, as shown in Figure 2-4.

Figure 2-4 Connecting the Telephone Line



- Step 3** Connect the base station to a power adapter as described in the “Connecting the Power Adapter” section.

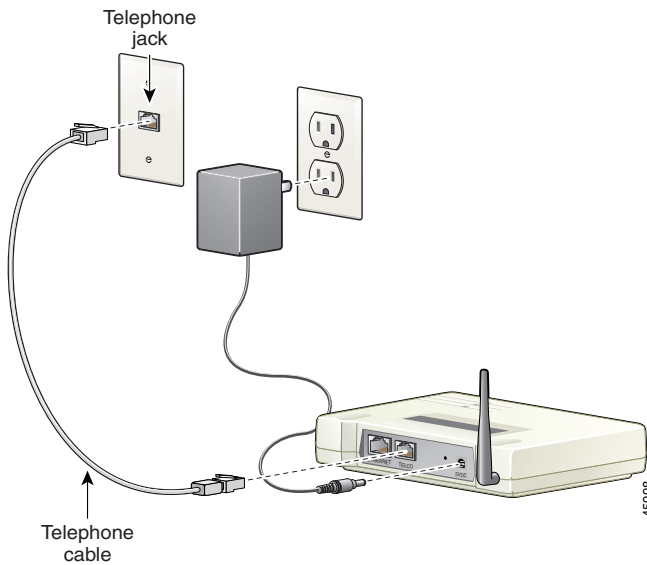
Connecting the Power Adapter

The base station does not have an on/off switch. Power is applied when the power adapter is plugged into the unit and connected to the AC wall outlet.

Follow these steps to connect the power adapter to the base station:

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- Step 1** Connect the power adapter to a suitable power receptacle, as shown in Figure 2-5.

Figure 2-5 *Plugging in the Power Adapter*



- Step 2** Connect the power connector to the back of the base station. The base station begins the power-on self-test (POST).
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Power-On Self-Test

The base station begins the POST when you connect it to an AC wall outlet. LEDs show the progress of the test. The LEDs are red, amber, or green to show the status of the base station.

When the unit is powered-on for the first time or if it has been reset to all default parameters, the LEDs display the following sequence:

- The Status LED blinks red once.
- All LEDs blink red, amber, and green.
- The Radio LED blinks several times.
- All LEDs turn off for approximately 5 to 6 seconds.
- The Status LED quickly flashes amber, meaning that the base station is set to factory defaults and is waiting for a wireless device to communicate configuration settings to it.

When the unit is powered-up and contains parameters other than the default settings, the LEDs display the following sequence:

- The Status LED blinks red once.
- All LEDs blink red, amber, and green.
- The Status LED blinks green for about 2 seconds.
- All LEDs turn off for about 8 to 10 seconds.

POST takes approximately 12 to 14 seconds. If start-up takes longer than 60 seconds, or if all three LEDs are red, see Chapter 4, “Troubleshooting.”

■ Connecting the Power Adapter